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Diagnosing Borderline Personality Disorder During Adolescence: A Review of the Published Literature

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Abstract

Borderline personality disorder (BPD) is a debilitating disorder that occurs in approximately 1% to 3% of the general population. BPD is not only relatively prevalent; it is also associated with significant public health and security concerns. The clinical and social burden of adult BPD diagnosis has resulted in the desire for early diagnosis and the implementation of early intervention programs. A qualitative review of the scientific literature suggested that adolescence is a critical point for the early identification and therapeutic treatment of BPD. Although findings are far from conclusive, the inter-rater reliability and internal consistency of the *Diagnostic and Statistical Manual of Mental Disorders* symptom criteria for BPD during adolescence seem adequate. Recent studies based on a rigorous methodology of BPD assessment and large community samples reported prevalence rates for BPD diagnosis during adolescence that were less suspect than previous findings. A number of research studies addressed the construct validity of BPD in adolescents (i.e., whether a BPD diagnosis during adolescence actually measures what is intending to measure) and reported consistent relationships between BPD and associated areas of dysfunction and distress as evidence of the validity of the BPD diagnosis. Research evidence indicates that there is no single symptom that is predictive of later BPD diagnosis during adolescence; rather, a pattern of two to three selected BPD symptoms that are evident during adolescence seemed to be highly predictive of later BPD diagnosis, particularly when measures that were specifically designed to assess for BPD during adolescence were used as part of the assessment process.

Keywords: borderline personality disorder; diagnosis; adolescence

Borderline personality disorder (BPD) is a debilitating disorder that occurs in approximately 1% to 3% of the general population (1,2). It is characterized by distressful, impairing, and pervasive dysregulation of the following: 1) affect (chronic fear of abandonment, affective instability, intense and inappropriate anger); 2) self-concept and attention (dissociative experience); of cognition (distorted thoughts and perceptions); 3) interpersonal relationships (intense, volatile); and 4) behavior (impulsivity and repetitive self-destructive behaviors) (1). Individuals with BPD often engage in self-injurious and suicidal behavior, gambling, compulsive shopping, substance or alcohol use, binge eating, and reckless driving (1,3). Given that these types of impulsive, self-destructive behaviors may lead to psychiatric hospitalization, incarceration, or both the rate of BPD in psychiatric settings is approximately 20%, and the rate in incarceration settings is even higher (1).

The clinical and social burden of adult BPD diagnosis has resulted in the desire for early diagnosis and the implementation of early intervention programs (4-6), which may promote more adaptive developmental pathways and avert many of the outcomes that were briefly summarized previously. During the last three decades, several clinicians and researchers started to raise doubts as to whether it is plausible to suggest that BPD "jumps out of the blue" in a person as he or she turns 18 (6-11). Indeed, adolescents with poor social and academic functioning are frequently described as showing a constellation of symptoms of emotion dysregulation, instability of self-image and

interpersonal relationships, and impulsivity that can be hardly differentiated from the clinical picture that would suggest a BPD diagnosis in adults (8,12). Moreover, the array and complexity of symptoms associated with BPD have inspired numerous etiological hypotheses regarding the developmental antecedents of BPD, including deprivation of early socialization, constant exposure to chaotic and traumatic environments, deviant family interactional patterns, and relatively subtle forms of neuro-psychological and biochemical impairment (1). These hypothetical developmental antecedents are thought to lead to maladaptive behaviors during adolescence or even during childhood, which in turn are thought to be predictive of a BPD diagnosis in adulthood.

Notwithstanding these considerations, applying a diagnosis of BPD (or of any personality disorder) to adolescents is still a controversial topic (5). The *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* (DSM-5) Section II definition permits the diagnosis of BPD in adolescents (3); however, it does remain vague, leaving much to clinical judgment (5). At the same time, adolescence may not represent a smooth transition to adulthood for many youngsters, and the transformations that physiologically take place during adolescence may cause difficulties for adolescents and their families (8). Indeed, adolescence is usually considered to be a developmental stage that is characterized by impulsivity, emotional and psychological turmoil, rapid mood swings, and increased vulnerability to breakdowns in adaptive behaviors (13,14). It is important that adaptive adolescence turmoil not be misdiagnosed as emerging BPD.

Given the stability and potential clinical implications of personality pathology in adolescents, it is important to examine whether BPD diagnoses can be reliably and validly diagnosed in this age group. All available data indicate that adolescence is a critical period in the early identification and therapeutic treatment of BPD. The study of BPD in adolescence could take advantage of an overview of current knowledge about this topic to evaluate the applicability of the BPD diagnosis to adolescents, to identify available instruments for detecting BPD characteristics during adolescence, and to plan evidence-based practices that are aimed at preventing the development of full-blown BPD pathology.

With these considerations in mind, a qualitative review of the published scientific literature was carried out to answer the following questions: 1) Is it possible to reliably diagnose BPD during adolescence? 2) If so, is there any evidence for the construct validity of BPD diagnosis during adolescence? 3) Is it possible to identify early "warning signs" of emerging BPD during adolescence? And are there any measures that were specifically designed to yield reliable and valid BPD diagnoses during adolescence?

Method

A search for studies dealing with BPD during adolescence was conducted via the PsychInfo and Scopus bibliographic databases. The following terms were used: "borderline personality disorder," "BPD," "borderline," "adolescence," and "teen." The search included all fields in the PsychInfo database and the title, abstract, and keywords in the Scopus database. Existing reviews were used as additional sources of information (5;15-17). Studies of any design that focused on BPD during adolescence were screened. To be included in this study, articles had to be written in English, and they had to include child, adolescent, and young adult samples. Of the articles identified, only those that specifically discussed the validity, reliability, stability, and assessment of BPD in adolescents and those that compared adolescents with BPD to adults with BPD were retained for the review.

Results

Table 1 presents an overview of the main studies included in this review.

The reliability of borderline personality disorder diagnosis during adolescence

When semi-structured interviews were used to assess DSM symptom criteria during adolescence, empirical studies consistently reported adequate inter-rater reliability values for BPD diagnosis, which were usually in the range of .85 to .88 range (18-20). The Childhood Interview for DSM-IV Borderline Personality Disorder (CI-BPD) represents the only current published interview-based measure specifically adapted for use in children and adolescents (21). Zanarini and colleagues (22) used it in a sample of 6410 11-year-old children in the United Kingdom. Inter-rater reliability with the use of taped interviews of 30 children revealed κ values that ranged from 0.36 to 1.0, with a median value of 0.88. Overall, 86% of the κ values were in the excellent range of more than 0.75, and two independent studies reported similar findings (23,24). Recently, Sharp and colleagues (25) showed that, with the use of the CI-BPD, the inter-rater reliability of the DSM-IV BPD diagnosis in adolescents was excellent, with a Cohen's κ value of 0.89. Although findings are far from conclusive, the internal consistency of the DSM symptom criteria for BPD during adolescence

TABLE 1. Overview of the Main Studies included in the Review

Authors	Population	Description	Results
Korenblum, Marton, Golombek & Stein; 1990	Nonclinical sample of urban 18 year olds	Forty-two percent of a nonclinical sample of urban 18 year olds displayed some degree of personality dysfunction.	Teenagers who initially presented as avoidant, dependent, compulsive, or passive-aggressive seemed to grow out of their dysfunction. Most of the adolescents who were identified as antisocial during early or middle adolescence migrated into the histrionic, narcissistic, borderline cluster during late adolescence.
Kutcher, Marton & Korenblum; 1990	20 euthymic bipolar teens	Twenty euthymic bipolar teens were assessed with the use of the Personality Disorders Examination.	Thirty-five percent met DSM-III-R criteria for at least one personality disorder. Three of the 20 (15%) had a BPD diagnosis.
Ludolph, Westen, Misle et al; 1990	50 females psychiatrically hospitalized at a major medical center	Twenty-seven female inpatients between the ages of 14 and 18 years were compared with 23 non-BPD, age-matched female inpatient controls on retrospectively assessed variables that measured psychological, familial, and constitutional factors.	Results support the notion that a chaotic or traumatic early environment can support the development of BPD.
Bernstein, Cohen, Velez, Schwab-Stone, Siever & Shinsato; 1993	A randomly selected community sample of 733 youths ranging in age from 9 to 19 years and followed for a 2-year period	The protocol consisted of structured interviews with the adolescents and their mothers as well as self-report questionnaires.	The overall prevalence of personality disorders peaked at age 12 in boys and at age 13 in girls; it declined thereafter. Obsessive-compulsive personality disorder was the most prevalent moderate Axis II disorder, narcissistic personality disorder was the most prevalent severe disorder, and schizotypal personality disorder was the least prevalent Axis II disorder. Longitudinal follow up revealed that, although most Axis II disorders did not persist over a 2-year period, subjects with disorders identified earlier remained at elevated risk for receiving a diagnosis again at follow up.
Garnet, Levy, Mattanah, Edell & McGlashan; 1994	21 adolescent inpatients with BPD were contacted 2 years after the index hospitalization	Diagnostic criteria that are relatively specific to BPD were identified in severely ill adolescent inpatients in the attempt of predicting stable BPD symptoms during this turbulent time.	Seven of these patients met the criteria for BPD at follow up. These criteria were sensitive for the stable disorder but not very specific.
Mattanah, Becker, Levy, Edell & McGlashan; 1995	70 hospitalized adolescents followed up 2 years after hospitalization	The stability of DSM-III-R disorders and groups of disorders in adolescent inpatients were examined. Adolescents were reliably assessed with the use of structured diagnostic interviews for DSM-III-R disorders. Two years later, the subjects were independently assessed with the same interviews.	Diagnostic stability in these hospitalized adolescents was less than that reported for adults. Personality disorder clusters were relatively unstable, especially those from Clusters A and C.
Pinto, Grapentine, Francis & Picariello; 1996	19 depressed female adolescents with BPD were compared with 21 depressed inpatients without BPD	The affective and cognitive features of BPD in adolescence were systemically examined with the use of standardized measures of these constructs while controlling for depression.	Both BPD and non-BPD adolescents endorsed significantly elevated levels of self-reported depression, anger, anxiety, hopelessness, self-deprecatory attributional style, and external locus of control. Adolescents with BPD endorsed significantly poorer self-concepts as compared with their non-BPD peers; this difference was not an artifact of depressive severity.
Meijer, Goedhart & Treffers; 1998	Hospitalized adolescents with (*n* = 14) and without (*n* = 22) BPD, according to the Diagnostic Interview for Borderlines	A follow-up study was conducted to determine the persistence of BPD and of separate BPD symptoms in adolescents.	Of the 14 adolescents with BPD, only 2 were again classified as having BPD after 3 years, but some of the separate BPD symptoms were still present. In the non-BPD group, no new cases were found after 3 years.
Becker, Grilo, Morey, Walker, Edell & McGlashan; 1999	38 adolescents and 28 adults assessed with the Personality Disorder Examination	The authors examined the applicability of personality disorder criteria to adolescent inpatients by evaluating internal consistency and criterion overlap.	Internal consistency appeared to be lower in adolescents, with the largest differences being identified for most Cluster B disorders. Intercategory analysis indicated that criterion overlap may be greater among adolescents.

Authors	Population	Description	Results
Levy et, Becker, Grilo et al; 1999	165 hospitalized adolescents assessed with a structured interview for personality disorder diagnoses; 2 years after initial assessment, 101 subjects were independently reassessed with the same measures	The authors investigated the concurrent and predictive validity of the DSM-III-R diagnosis of personality disorder in adolescents by means of baseline and follow-up assessments of inpatients treated at the Yale Psychiatric Institute.	At baseline, adolescents with personality disorders were significantly more impaired than those without personality disorders. At follow up, adolescents with a personality disorder diagnosis at baseline had used significantly more drugs and had required more inpatient treatment during the follow-up interval. Over time, the scores on the Global Assessment of Functioning Scale and the Symptom Checklist-90-Revised of adolescents who had been diagnosed with personality disorders at baseline became more similar to the scores of adolescents without personality disorders.
Becker, Grilo, Edell & McGlashan; 2000	138 adolescents and 117 adults were reliably assessed with the Personality Disorder Examination	The authors examined the comorbidity of BPD with other personality disorders in a series of consecutively admitted adolescents. For comparison, the comorbidity of BPD with other personality disorders was also examined in a series of adults consecutively admitted to the same hospital during the same period.	Sixty-eight adolescents and 50 adults met the diagnostic criteria for BPD. For the adults, significant diagnostic co-occurrence with BPD was observed for antisocial personality disorder only. For the adolescents, BPD showed significant co-occurrence with schizotypal and passive-aggressive personality disorders.
Chabrol, Montovany, Chouicha, Callahan & Mullet; 2001	A random sample of 1363 high school students completed the Screening Test for Comorbid Personality Disorders; 107 of them volunteered to be interviewed	The authors estimated the frequency of BPD in French high school students.	This study found a high frequency of BPD among French adolescents. The authors estimated the overall frequency of BPD to be 10% for boys and 18% for girls. After a peak of frequency at the age of 14 years for both sexes, the frequency increased significantly again during late adolescence.
Crawford, Cohen & Brook; 2001	A community sample of 407 adolescents	This study examined the relationship over time between Cluster B personality disorder symptoms and comorbid internalizing and externalizing symptoms	Internalizing and externalizing symptoms each predicted subsequent Cluster B symptoms in girls, although these effects occurred only at specific developmental stages. Cluster B symptoms in boys and girls at the ages 10 to 14 years predicted externalizing symptoms 2 years later.
Grilo, Becker, Edell & McGlashan; 2001	60 adolescent inpatients assessed with the Personality Disorder Examination soon after admission to the Yale Psychiatric Institute and independently reassessed with the same instrument 2 years after discharge	The authors examined the stability of DSM-III-R personality disorder dimensions in a clinical sample of adolescents.	As compared with baseline, dimensional scores for most personality disorders were significantly lower at follow up; none were significantly higher. Low to moderate stability for dimensional measures of personality dysfunction in adolescents was observed.
Becker, Grilo, Edel, & McGlashan; 2002	123 adolescents and 106 adults assessed with the Personality Disorder Examination	The authors examined the diagnostic efficiency of BPD criteria in adolescent inpatients. For comparison, the diagnostic efficiency of BPD criteria was also examined in a group of concurrently recruited adult inpatients.	Sixty-five adolescents and 50 adults met the diagnostic criteria for BPD. There were no significant differences between groups with regard to base rates of BPD diagnosis or for any BPD criteria. The best inclusion criterion for the adolescents was abandonment fears, although for the adults all symptoms were approximately equivalent in this regard. The most efficient exclusion criterion was uncontrolled anger for the adolescents and impulsiveness for the adults.
Chabrol, Montovany, Callahan, Chouicha & Ducongé; 2002	A non-patient sample of 118 adolescents	The goal of this study was to examine the factor structure of the Revised Diagnostic Interview for Borderlines	A principal components factor analysis with a Varimax rotation extracted three factors. A confirmatory factor analysis showed that this three-factor model provided an adequate fit. There may be homogeneous components of BPD symptomatology in adolescents that may reflect affective disturbances and defensive mechanisms.

Authors	Population	Description	Results
Chanen, Jackson, McGorry, Allot, Carkson & Yuen; 2004	101 participants who were 15 to 18 years old were assessed with the use of the SCID-II at baseline; 97 were re-interviewed face-to-face at 2 years	The 2-year stability of categorical and dimensional personality disorder in an older adolescent psychiatric outpatient sample was examined.	Of the participants with a categorical personality disorder diagnosis at baseline, 74% still met criteria for a personality disorder at follow up, with marked gender differences (83% of females and 56% of males). However, categorical personality disorder endured in 100% of those who received inpatient care. The study supports that, in late teenage outpatients, the 2-year stability of the global category of personality disorder is high, and the stability of dimensionally rated personality disorder appears to be similar to that found among young adults.
Bondurant, Greenfield & Tse; 2004	**36 publications**	**Relevant publications were reviewed.**	**The construct validity of adolescent BPD is supported by internal consistency, group differences, convergent validity, and concurrent validity. By contrast, the adolescent BPD criteria manifested less construct validity than the adult diagnosis in that the criteria did not uniformly predict the overall diagnosis; there was more criterion overlap with other personality disorders and a broader pattern of Axis II comorbidity. Further diminishing the construct validity is the fact that factor analysis suggested that adolescent BPD was not a single entity. Its low predictive validity was demonstrated by little diagnostic stability through adolescence into adulthood.**
Crick, Murray-Close & Woods; 2005	A normative sample of 400 (54% female) fourth though sixth graders who were assessed during the Fall of Year 1, Spring of Year 1, and Fall of Year 2	The goals of this study were as follows: the development of a psychometrically sound self-report instrument that assesses BPD during childhood, the BPFSC; the examination of the stability of BPD features during childhood; the evaluation of gender differences in BPD features during childhood; and the evaluation of the specificity of the BPFSC for the assessment of BPD features.	The use of linear mixed modeling techniques provided evidence for the construct validity of the BPFSC. BPD features as assessed with the BPFSC were found to be moderately stable over the course of the study, with girls reporting higher levels of BPD features than boys. Results also demonstrated that children's scores on the BPFSC were uniquely related to indicators of BPD pathology above and beyond their scores on the Children's Depression Inventory.
Becker, McGlashan & Grilo; 2006	123 adolescent inpatients assessed with structured diagnostic interviews for DSM-III-R Axis I and II disorders	The authors examined the factor structure of BPD in hospitalized adolescents, and they also sought to add to the theoretical and clinical understanding of any homogeneous components by determining whether they may be related to specific forms of Axis I pathology.	Exploratory factor analysis of BPD criteria in adolescent inpatients revealed four BPD factors that appear to differ from those reported for similar studies of adults. The factors represent components of self-negation, irritability, poorly modulated relationships, and impulsivity.
Chabrol & Leichsenring; 2006	A nonclinical sample of 243 adolescents	The aim of this study was to explore the relationship of the structural criteria of BPD organization (as assessed by the French version of the Borderline Personality Inventory) with psychopathic traits (as assessed by the French version of the Levenson Self-Report Psychopathy Scale).	Significant correlations were found between the Borderline Personality Inventory scales of identity diffusion, primitive defense mechanisms, impaired reality testing, and psychopathic traits of callousness and impulsivity, which suggests that BPD may contribute to psychopathic traits in non-forensic, non-clinical adolescents.
Nock, Joiner, Gordon, Lloyd-Richardson & Prinstein; 2006	89 inpatients who engaged in non-suicidal self-injury during the previous 12 months were clinically interviewed	This study reported on the diagnostic correlates of adolescents with a recent history of non-suicidal self-injury and examined the relationship between non-suicidal self-injury and suicide attempts	Results revealed that 87.6% of adolescents who engaged in non-suicidal self-injury met the criteria for a DSM-IV Axis I diagnosis. Most adolescents assessed also met criteria for an Axis II personality disorder (67.3%). Overall, 70% of adolescents who engaged in non-suicidal self-injury reported a lifetime suicide attempt, and 55% reported multiple attempts.
Segal-Trivitz, Bloch, Goldburt, Sobol-Havia, Levkovitch & Ratzoni; 2006	20 adolescents and 20 adults	A retrospective chart review of 20 adolescent and 20 adult BPD patients was conducted to characterize adolescent BPD and compare it with adult BPD. The retrieved data included demographics, history features, symptoms, and observations made during hospitalizations and treatments.	This study supported the general similarity of BPD between adolescents and adults. The differences included the number of report pages during hospitalization, current self-mutilation, past and present obsessive-compulsive symptoms, and past escapes. Adults had more alcohol abuse.

Authors	Population	Description	Results
Chanen, Jovev, Djaja et al; 2008	101 outpatient youth between the ages of 15 and 25 years	This study compared the MSI-BPD, the BPQ, the BPD items from the International Personality Disorder Examination Screening Questionnaire, and the BPD items from the SCID-II Personality Questionnaire.	All four instruments performed similarly, but the BPQ had the best mix of characteristics, with moderate sensitivity, the highest specificity, a high negative predictive value, and a moderate positive predictive value. As compared with the other three instruments, the BPQ had the highest overall diagnostic accuracy, a substantially higher kappa with the criterion diagnosis, the highest test-retest reliability, and the highest internal consistency. The only clear difference to emerge in the receiver-operating characteristic curve analysis was that the BPQ significantly outperformed the MSI-BPD.
Miller, Flory, Miller, Harty, Newcorn & Halperin; 2008	A longitudinal sample of 96 adolescents diagnosed with ADHD were compared with a matched control group of 85 adolescents who had never been diagnosed with ADHD	This study examined the presence of personality disorders in a longitudinal sample of 96 adolescents who had been diagnosed with ADHD when they were 7 through 11 years old as compared with a matched control group of 85 adolescents who had never been diagnosed with ADHD. Participants were between 16 and 26 years old at follow up.	Individuals diagnosed with ADHD during childhood are at increased risk for personality disorders during late adolescence (specifically borderline, antisocial, avoidant, and narcissistic personality disorders). Those with persistent ADHD were at higher risk for antisocial and paranoid personality disorders but not for other personality disorders when compared with those in whom ADHD had remitted.
Miller, Muehlenkamp & Jacobson, 2008	**Of the 205 articles identified, only those that specifically reported on the validity, reliability, and stability of BPD in adolescents and those that compared BPD in adolescents with BPD in adults were retained.**	**This article reviewed the empirical literature to evaluate the prevalence, reliability, and validity of a BPD diagnosis during adolescence.**	**It was concluded that the features of BPD diagnoses in adolescents are comparable with those found in adults. Furthermore, there appears to be a legitimate subgroup of adolescents for whom the diagnosis remains stable over time as well as a less severe subgroup that moves in and out of the diagnosis. Although caution is warranted, the formal assessment of BPD in adolescents may yield more accurate and effective treatment for adolescents who are experiencing BPD symptomatology.**
Winograd, Cohen & Chen; 2008	A randomly selected community cohort of adolescents from the Children in the Community Study; the retained sample was characteristic of the full sample (*N* = 748; age range, 9 to 18 years in 1983 and 1984; 50% male and 50% female)	In this study, the relationship of early BPD symptoms to subsequent psychosocial functioning and attainment was investigated on the basis of data from the Children in the Community cohort.	On average, participants with higher levels of early adolescent BPD symptoms scored consistently lower in role function, social function, and life satisfaction from mid adolescence through mid adulthood. BPD symptoms predicted lower academic and occupational attainment, less partner involvement, and fewer attained adult developmental milestones. Adolescent BPD symptoms were also associated with adult BPD symptoms, BPD diagnosis, general impairment, and the need for services at a mean age of 33 years. These effects were evident despite symptom decline with age, and they were independent of adolescent Axis I disorders.
Biskin, Paris, Renaud, Raz & Zelkowitz; 2011	47 adolescent girls assessed over a 10-year period	This study examined the outcomes of patients who were diagnosed with BPD before they were 18 years old.	Thirty-one participants had a prior diagnosis of BPD, whereas 16 had not met BPD criteria. At 4.3 years after initial presentation (mean age, 19.6 years), only 11 index patients still met criteria for BPD, and no new cases developed. Those who did not remit were significantly more likely to have a current episode of major depressive disorder, lifetime substance use disorder, and self-reported childhood sexual abuse.
Chang, Sharp & Ha; 2011	An inpatient sample of adolescents (*n* = 51) ranging in age from age 12 to 18 years completed the BPFS and were administered the CI-BPD by trained clinical research staff	The purpose of the study was to examine the criterion validity of the BPFSC by assessing the performance of the self-report and a newly developed parent report version of the measure (the BPFSP) for the detection of a BPD diagnosis in adolescent inpatients. This study also examined parent-child agreement and the internal consistency of the BPFS subscales.	The BPFSC demonstrated high accuracy with regard to identifying adolescents with diagnoses of BPD as measured by the CI-BPD, whereas the BPFSP had moderate accuracy. Parent-child agreement for the total scores was significant. Cronbach's alphas suggested internal consistency for the four subscales of the BPFS.

Authors	Population	Description	Results
Sharp, Pane, Ha et al; 2011	111 adolescent inpatients between the ages of 12 and 17 years	This study aimed to examine mentalizing in adolescents with emerging BPD from a dimensional and categorical point of view after controlling for gender, age, and Axis I and Axis II symptoms. It also aimed to explore the mediating role of emotion regulation in the relationship between theory of mind and BPD traits.	The findings suggested a relationship between BPD traits and "hypermentalizing" (i.e., excessive and inaccurate mentalizing) that was independent of age and gender as well as of externalizing, internalizing, and psychopathy symptoms. The relationship between hypermentalizing and BPD traits was partially mediated by difficulties with emotion regulation; this accounted for 43.5% of the hypermentalizing-to-BPD path.
Sharp, Mosko, Chang & Ha; 2011	171 community boys between the ages of 8 and 18 years completed the BPFSC and a self-report measure of Axis I psychopathology; parents completed a parent-report version of the BPFSC (the BPFSP) and a standard measure of Axis I psychopathology	This study investigated the cross-informant concordance (i.e., youth self-report vs. parent-report) of the BPFSC; it also examined the concurrent validity of the BPFSC by showing that youth who had high scores on the BPFSC also demonstrated poor clinical and psychosocial functioning as measured by a standard Axis I scale.	Concurrent validity and modest parent-child concordance were demonstrated for the BPFSC. The BPFSC and BPFSP show promise as dimensional measures for the assessment of BPD features in boys. Youth with BPD features showed poorer clinical and psychosocial functioning in all domains, especially where externalizing problems were concerned.
Westen, Betan & Defife; 2011	A national random sample of 139 psychiatrists and clinical psychologists completed a battery of instruments with a randomly selected adolescent patient in their care	This study investigated the nature of identity disturbance in an adolescent clinical sample and explored its links with personality pathology, particularly BPD.	Identity disturbance in adolescents is a clinically meaningful and multidimensional construct that exhibits significant relationships with different forms of severe personality pathology, most notably BPD.
Zanarini, Horwood, Wolke, Waylen, Fitzmaurice & Grant; 2011	A birth cohort of 6330 11-year-old children in Bristol, England, was interviewed about borderline psychopathology in 2002, 2003, and 2004; a community sample of 34,653 American adults was interviewed about borderline psychopathology in 2004 and 2005	This study had two main objectives. The first was to assess the prevalence of DSM-IV BPD and its constituent symptoms in a community sample of late-latency children. The second was to compare these rates with those found in a community sample of American adults.	The results of this study suggest that 11-year-old children are about half as likely as adults to meet the DSM-IV criteria for BPD. They also suggest that gender does not play a defining role in symptom expression. Rates of chronic emptiness, physically self-damaging acts, and stormy relationships were very similar in both samples. However, a significantly higher percentage of children than adults reported being angry and moody. By contrast, a significantly higher percentage of adults than children reported being paranoid or dissociated, having a serious identity disturbance, being impulsive, and making frantic efforts to avoid abandonment. In addition, a significantly higher percentage of adults than children met DSM-IV criteria for BPD. Statistically significant but clinically minor gender differences were also found between girls and boys as well as between men and women.
Sharp, Ha, Michonski, Venta & Carbone; 2012	An inpatient sample of adolescents (*N* = 245)	The aim of the current study was to examine various psychometric properties of the CI-BPD, a promising interview-based measure of adolescent BPD.	As has been found in several adult studies, the confirmatory factor analytic results supported a unidimensional factor structure for the CI-BPD, which indicates that the DSM-IV criteria on which the CI-BPD is based constitute a coherent combination of traits and symptoms, even in adolescents. In addition, other validity criteria were found to be excellent.
Stepp, Burke, Hipwell & Loeber; 2012	Annual longitudinal data from the two oldest cohorts in the Pittsburgh Girls Study (*N* = 1233).	The current study addresses symptoms of ADHD and ODD as potential precursors of BPD in adolescence.	Higher levels of ADHD and ODD scores at the age of 8 years uniquely predicted BPD symptoms at the age of 14 years. In addition, the rate of growth in ADHD scores from the age of 10 to 13 years and the rate of growth in ODD scores from the age of 8 to 10 years uniquely predicted higher BPD symptoms at the age of 14 years.

Authors	Population	Description	Results
Bornovalova, Hicks, Iacono & McGue; 2013	1280 female adolescent twins between the ages of 14 and 18 years	This study examined the developmental course, reciprocal influences, and genetic and environmental factors underlying the co-occurrence of BPD traits and substance use.	Rank-order stability was moderate to high for both BPD traits and substance use, whereas the mean levels of substance use increased substantially from the ages of 14 to 18 years; BPD traits showed a small decline. BPD traits and substance use exhibited concurrent and prospective associations; however, the longitudinal associations dropped to non-significance after accounting for the temporal stability of each trait. Twin analyses revealed that shared environmental factors accounted for the association between BPD traits and substance use at the age of 14 years, but genetic factors account for the association at the age of 18 years.
Glenn & Klonsky; 2013	174 adolescents (75.9% female; mean age, 15.13 years) from inpatient and partial hospitalization units	This study examined the reliability and validity of BPD in a large sample of adolescent psychiatric patients.	Approximately 30% of patients in the sample met the criteria for BPD. The nine BPD criteria demonstrated good internal consistency that was equivalent to rates reported in adult samples. In addition, BPD was related to greater clinical severity and impairment as indexed by strong associations with all major Axis I disorders as well as with dimensional measures of depression, anxiety, difficulties with emotion regulation, and impulsiveness. Notably, reliability and validity remained satisfactory even when analyses were limited to younger adolescents between the ages of 12 and 14 years.
Michonski, Sharp, Steinberg & Zanarini; 2013	A population-based sample (*N* = 6339) of young adolescents (ages 11 and 12) from the United Kingdom	IRT methods were used to investigate the psychometric properties of the DSM-IV BPD criteria. BPD was also assessed with the use of the CI-BPD.	A single underlying dimension adequately accounted for covariance among the BPD criteria. Each criterion was found to be discriminating to a degree comparable to what has been reported in adult studies. Five criteria were found to exhibit differential item functioning between boys and girls. However, differential item functioning balanced out for the total interview score.
Noblin, Venta & Sharp; 2013	121 adolescents from an acute care inpatient unit	This study evaluated the reliability and the convergent and criterion validity of the MSI-BPD in an effort to establish the clinical utility of the MSI-PBD as a screening measure for BPD in inpatient adolescents.	Findings demonstrated support for the validity of the MSI-BPD when it was used among inpatient adolescents. A clinical cutoff of 5.5 was established.
Sharp, Steinberg, Temple & Newlin; 2014	A community sample of 964 adolescents (mean age, 15.1 years; 55.9% female) and an independent sample of 371 inpatient adolescents	This study evaluated the BPFSC and developed a short version of the BPFSC through the use of IRT methods.	The hypothesized four-factor structure was not supported. The unidimensional IRT analysis demonstrated instances of local dependence among item pairs and item responses that were not strongly related to the underlying construct. As a consequence, items were eliminated to create a unidimensional 11-item brief BPFSC (the BPFSC-11). Evidence of the construct validity of scores based on the shortened version was evaluated with the use of an independent inpatient adolescent population. The authors demonstrated similar indices of construct validity as have been observed for the BPFSC total score with the BPFSC-11 scores, and they found evidence of good criterion validity.

ADHD, Attention-deficit/hyperactivity disorder; *BPD,* borderline personality disorder; *BPFS,* Borderline Personality Features Scale; *BPFSC,* BPFS for Children; *BPFSP,* BPFS for Parents; *BPQ,* Borderline Personality Questionnaire; *CI-BPD,* Child Interview for DSM-IV Borderline Personality Disorder; *DSM, Diagnostic and Statistical Manual of Mental Disorders; IRT,* item response theory; *MSI-BPD,* McLean Screening Instrument for Borderline Personality Disorder; *ODD,* oppositional defiant disorder; *SCID-II,* Structured Clinical Interview for DSM Axis II Disorders.
Note: For ease of presentation, studies are reported in chronological order. **Bold text** indicates review articles.

seems adequate (a = 0.76) as well as comparable with the internal consistency observed with adult participants (a = 0.74) (18). Sharp and colleagues (25) demonstrated that the Cronbach's a value of the DSM-IV BPD criteria in a large sample (N = 245) of adolescent inpatients was 0.80 when the CI-BPD was used to assess BPD. Recently, Michonski and colleagues (26) demonstrated the use of an item response theory approach in a large, population-based sample (n = 6339) of young adolescents from the United Kingdom (ages 11 and 12). In their study, a single underlying dimension adequately accounted for covariance among the BPD criteria; moreover, each criterion was found to be discriminating to a degree comparable to what has been reported in adult studies.

As a whole, psychometric data clearly indicate that BPD could be reliably diagnosed during adolescence with the use of descriptive diagnostic criteria (5). The lower values that were observed for the internal consistency of BPD criteria, when compared with the values of inter-rater reliability for BPD diagnosis, suggest that the clinical presentation of BPD during adolescence may be as heterogeneous as it is during adulthood. In addition, diagnostic agreement between independent clinicians and the research that addresses BPD diagnosis during adolescence is good. Although some studies have reported disproportionally high prevalence rates for DSM-based BPD diagnosis, with values ranging from roughly 11% (27) to 14% (28), these findings were likely to be the result of the unreliable assessment of BPD features and sampling bias (5). Recent studies that were based on a rigorous methodology of BPD assessment and large community samples reported prevalence rates for BPD diagnosis during adolescence that were less suspect than the previous findings. With the use of the CI-BPD in a community sample of 6330 11-year-old participants who were interviewed after their eleventh birthdays, Zanarini (29) reported a base rate of 3.27% for DSM-IV-TR BPD diagnosis. This finding closely matched the epidemiological data regarding the prevalence of BPD in general population samples of adult participants (2). Interestingly, when Zanarini and colleagues (22) compared the prevalence of BPD in the community sample of 6330 11-year-old participants with the prevalence of BPD in a community sample of 34,653 American adults, they reported that a significantly higher percentage of adults than children met the DSM-IV criteria for BPD (5.9% vs. 3.2%, respectively). Although BPD criteria may be over-inclusive with regard to symptoms that characterize the developmental period of adolescence (5), prevalence rates of thoroughly assessed BPD diagnoses did not advise against diagnosing BPD during adolescence or even during late childhood). Researchers considered stability to be a key defining feature of BPD and emphasized the persistence (i.e., temporal stability) of BPD diagnosis over time as the "gold standard" with regard to the reliability of the BPD diagnosis during adolescence (5). Some research that is based primarily on community samples suggested that BPD may have concurrent validity during adolescence (i.e., it is a valid indicator of distress and dysfunction) but that it is relatively unstable over time (15,27,30,31); this suggests that BPD during adolescence may reflect a point-in-time disturbance rather than a chronic impairment (32). However, current research indicates that BPD is not particularly stable in adult samples either and that symptoms are likely to be reduced through treatment efforts to a subclinical or non-clinical level of dysfunction (33,34). Recent data from a study of 47 adolescent girls who were assessed over a 10-year period suggest a pattern of enduring functional and psychopathological impairments associated with poor outcomes among individuals diagnosed with BPD, even if there was symptomatic remittance (35). This finding is highly consistent with the results of Zanarini and colleagues' (36) 16-year follow-up study of adults with BPD, which indicated that sustained symptomatic remission is substantially more common than sustained recovery from BPD and that sustained remissions (defined as no longer meeting the study criteria for BPD or for any other personality disorder per the DSM-III-R criteria (37) for a period of two years or longer or one follow-up period) and recoveries (defined as a Global Assessment of Functioning score of 61 or higher) are substantially more difficult for patients with BPD to attain and maintain as compared with patients with other forms of personality disorders.

In summary, available research data indicate that BPD can be reliably diagnosed during adolescence. The BPD diagnosis itself is likely to be less stable than it was previously thought during both adolescence and adulthood, and this diagnosis seems to be composed of acute symptoms and trait-like—or temperament-like—dysfunctional features. The relevance of an early diagnosis of BPD during adolescence is stressed by the fact that poor outcomes have been observed among young adults who were diagnosed with BPD during adolescence, even in the case of the remission of BPD.

The construct validity of borderline personality disorder diagnosis during adolescence

A number of research studies tried to address the construct validity of BPD in adolescents; these studies looked at whether a BPD diagnosis during adolescence actually measures what it is intending to

measure, and they pointed to the consistent relationships found between BPD and associated areas of dysfunction and distress as evidence of the validity of the BPD diagnosis (18,19,32,38-44). Overall, adolescents with BPD diagnoses, as compared with a control group of adolescents without BPD, demonstrated the following over time: 1) lower Global Assessment of Functioning scores and higher scores on self-report measures of acute psychiatric symptoms (e.g., anxiety, depression) (32); 2) social impairment (e.g., fewer and shorter friendships, less enjoyment of others, a lack of a confidant, the absence of a romantic relationship, fewer social activities) (45); 3) school or work problems (e.g., repeating grades, dropping out of school) (45); 4) higher rates of comorbidities involving Axis I diagnoses (18,40,41,44); 5) a higher frequency of contact with the police as a result of antisocial behavior (39,45); and 6) a higher frequency of drug use (46).

Becker and colleagues (45) reported that the mean inter-criterion correlations for BPD criteria were low but also similar across adolescent and adult groups (.28 and .26, respectively). Discriminant validity was adequate and similar for the adolescents and adults as evidenced by low diagnostic overlap measured through inter-category mean inter-criterion correlations (.07 and .06, respectively). In a study of the diagnostic efficiency of BPD criteria between adolescent and adult inpatients, Becker and colleagues (38) found no significant differences in the base rates of BPD between the two groups nor among any of the BPD criteria; similar findings were also obtained in Segal-Trivitz and colleagues' study (47). Although some studies reported a substantial overlap among the individual symptom criteria of BPD and other Axis I and Axis II disorders (48,49), several studies indicated that some BPD in adolescents can be reliably distinguished from other Axis I disorders (18,40,41,44). Recently, Glenn and Klonsky (50) recruited a sample of 174 adolescents (75.9% female; mean age, 15.13 years) from the inpatient and partial hospitalization units of a hospital in the northeastern United States that provides short-term treatment for adolescents with severe psychopathology. As has been found in previous studies, approximately 30% of patients in the current sample met the criteria for BPD. The nine BPD criteria demonstrated good internal consistency, and this was equivalent to rates reported with adult samples. In addition, BPD was related to greater clinical severity and impairment as indexed by strong associations with all major Axis I disorders as well as with dimensional measures of depression, anxiety, difficulties with emotion regulation, and impulsiveness.

Studies showed that adolescents diagnosed with BPD at baseline continued to experience some level of affective disturbance or behavioral disruption even during remission from BPD (i.e., when they did not meet the criteria for BPD diagnosis any longer) (35,43). The finding that functional impairments persisted among adolescents who no longer met BPD criteria, particularly for affective disturbances, is consistent with the findings in the adult literature.

Available scientific evidence—together with recent studies based on the thorough assessment of DSM-IV BPD criteria in a large, community-based sample of adolescents (26)—indicate that a dimensional perspective may be particularly important for conceptualizing BPD pathology among youth. This type of perspective is better able to account for the developmental fluctuations and increased heterogeneity that have been reported in younger samples.

The high level of comorbidity between BPD and several Axis I disorders—particularly mood disorders, anxiety disorders, substance abuse, eating disorders, post-traumatic stress disorder, and attention-deficit/hyperactivity disorder (ADHD)—that was frequently reported in the scientific literature called into question the diagnostic specificity of BPD during adolescence (8). However, it should be observed that the comorbidity rate between Axis I disorders and BPD that is observed in adolescent samples is consistent with the epidemiological data that have been obtained with adult BPD samples. Co-occurrence base rates between BPD and Axis I diagnoses among adults are usually in the range of 10% to 30% for bipolar I/II disorders, 30% to 50% for eating disorders and post-traumatic stress disorder, 50% for substance use disorder, and 50% to 60% for anxiety disorders (51-53).

The differential diagnosis between BPD and mood disorders may be problematic, because mood disorders are themselves poorly characterized in adolescents; this may be particularly difficult in the case of bipolar II disorder. However, it should be stressed that the affective shifts of BPD oscillate between anger and dysphoria rather than between elation and depression (as bipolar disorders do), and they tend to be rapidly reversible and exquisitely reactive to the relationship context rather than endogenously driven and episodic (54,55).

Studies have demonstrated an important association between ADHD and late BPD (56-61). ADHD and BPD share some clinical features, particularly impulsivity and emotional instability (60). Given the similarities in symptom presentation, one might think that ADHD and BPD are different modes of the same disorder.

However, states of inner tension (62), which are often regulated through self-injurious behavior and repeated suicidal ideation as well as temporary stress-related paranoid ideation or dissociative symptoms, are typical of BPD but not of ADHD. Inadequate efforts to prevent abandonment in intense but unstable relationships, the marked instability of identity and extreme alterations in thinking (i.e., devaluation vs. idealization), and feelings of emptiness are features of BPD. These severe symptoms rarely occur in patients with ADHD, whereas inattention and hyperactivity (the core symptoms of ADHD) are not considered typical of patients with BPD; this suggests marked differences between the two disorders (63). Moreover, impulsivity—a severely impairing characteristic of patients with both disorders (64) — is primarily driven by affective and interpersonally sensitive aspects in those with BPD, whereas deficits in attentional and cognitive processing account for the behavior inhibition problems referred to as *impulsivity* in those with ADHD (63). In sum, ADHD, residual type, should not be misdiagnosed as BPD, and emerging BPD should not be confused with residual ADHD.

Dysfunctions in social cognition (i.e., understanding behavior in mental state terms, theory of mind, or mentalizing) have been proposed as explanations for disturbances of interpersonal behavior in patients with BPD (24;65-67). Individuals who have been diagnosed with neurodevelopmental conditions such as autism or Asperger syndrome have core deficits in social cognition (68,69). However, it is noteworthy that hypermentalizing (i.e., over-interpretive mental state reasoning) was associated with BPD features in adolescents (24), whereas insufficient mental state reasoning that resulted in incorrect and reduced mental state attribution were reported for adolescents with autism (70). The core features of BPD (i.e., impulsivity, affective instability, and instability in interpersonal relationships) are not typical for autism spectrum disorders and pervasive developmental disorders (71). A recent study revealed clear differences between the personality profile of adults with autism spectrum disorders and the personality and personality pathology profiles of those with narcissistic personality disorders or BPD and nonclinical controls, respectively (72).

The warning signs of emerging borderline personality disorder during adolescence and the measures specifically designed to diagnose this condition during adolescence

Research evidence indicates that there is no single symptom that is predictive of BPD diagnosis during adolescence (8); rather, a pattern of two to three selected BPD symptoms that are evident during adolescence seemed to be highly predictive of later BPD diagnosis. Early studies reported that symptoms with the highest predictive power (i.e., the most stable symptoms) for adolescents were chronic feelings of emptiness as well as inappropriate and intense anger (20). Additional studies have also consistently identified symptoms of identity disturbance, affective instability, and inappropriate, intense anger as having the greatest predictive power for BPD in adolescents (38;42-44). The positive predictive power of these three symptoms is almost identical to that identified in the adult BPD literature (19,38), which suggests that apparent key symptom criteria are valid across age groups. The role of identity disturbance as a core diagnostic feature of BPD during adolescence was strongly supported by Westen and colleagues (73); in their study, identity disturbance in adolescents appeared to be highly similar to identity disturbance in adults, and it was significantly predictive of BPD symptoms. Recently, Michonski and colleagues (26) reported that a single underlying dimension adequately accounted for covariance among the BPD criteria. Each criterion was found to be discriminating to a degree comparable to what has been reported in adult studies. As in adult findings (74,75), five BPD criteria were found to exhibit differential item functioning (i.e., differences in the relation of an item to the latent trait across population subgroups) between boys and girls. Michonski and colleagues (26) found paranoid ideation and identity disturbance to be the most discriminating DSM-IV BPD criteria in boys and girls, respectively. BPD characteristics involving emotional reactivity or poor impulse control (i.e., inappropriate and intense anger or difficulty controlling anger, affective instability, and impulsivity) were easier to endorse as compared with suicidal behaviors (girls) and abandonment fears (boys), which were more difficult to endorse (i.e., they required the highest level of BPD liability).

Deliberate non-suicidal self-harm deserves a particular consideration. Although deliberate self-harm is a common feature of BPD during adolescence (76), it is neither necessary nor sufficient for the diagnosis of this condition (e.g., 77). However, deliberate self-harm during adolescence should be carefully assessed as a result of four key issues: 1) Deliberate self-harm is highly addictive, because it releases opiates that relieve the pain associated with and the sensitivity to abandonment, rejection, or difficulties in attunement associated with the reduced opiates that are shown to be implicated in self-injurious behavior in those with BPD (78). 2) During adolescence, deliberate non-suicidal self-harm significantly overlaps with suicidal behavior,

including instances of unintended accidental death or near death during the course of deliberate self-harm (76). 3) Deliberate non-suicidal self-harm is an instance of non-mentalizing behavior (8) that is consistently associated with emotional neglect (79) and dissociation triggered by abandonment, rejection, or a lapse in attunement (80). 4) Deliberate non-suicidal self-harm is a marker of mentalizing collapse, which is strongly associated with dissociation and evocative of intense (albeit frequently chaotic and problematic) reactions in others; these include acute hospitalizations and desperate efforts of parental control mixed with feelings of guilt, shame, rage, and despair that spur coercive cycles that lead to further impairment in the mentalistic abilities of both adolescents with BPD and their parents.

Recent data indicate that selected childhood disorders and behavioral problems may represent childhood antecedents of emerging BPD features during adolescence (81). Common factors that underlie ADHD and BPD (e.g., behavioral and neurocognitive impairments) as well as those that underlie oppositional defiant disorder (ODD) and BPD (e.g., affective and interpersonal disturbances) point to possible developmental links between these childhood disorders and BPD. Burke and Stepp (82)—with the use of prospective data from the Developmental Trends Study (83) a clinic-referred sample of 177 boys—found that childhood and adolescent symptoms of ODD and ADHD as well as marijuana use predicted BPD symptoms at the age of 24 years. Interestingly, conduct disorder, depression, and anxiety were not related to BPD symptoms in young adulthood in this study. This finding was replicated by Stepp and colleagues (84) in a study based on data from 1233 girls who ranged in age from 8 to 14 years. The authors found that ADHD and ODD symptoms at age 8 predicted BPD symptoms at age 14; moreover, the rate of growth of ADHD symptoms from the ages of 8 to 10 years and the rate of growth of ODD symptoms from the ages of 10 to 13 years predicted BPD symptoms at age 14. These patterns of prospective associations were not found for conduct disorder or depression at that age of 14 years (84). Both studies found a similar pattern of results even though the samples were quite unique, with one consisting of a clinical sample of boys (82) and the other comprising a high-risk community sample of girls (84). Most of the discriminating BPD features (i.e., the core diagnostic features) seen during adolescence are summarized in Table 1. Although these warning signs of emerging BPD may be captured by a clinician during a clinical interview, the early identification and treatment of BPD would be greatly enhanced by the careful and accurate assessment of personality pathology in adolescents. As Sharp and colleagues (25) pointed out, valid and reliable instruments that are both time- and cost-effective may complement the clinical assessment of BPD features during adolescence. Such instruments should take into account the recent emphasis on dimensional models of maladaptive personality functioning (85), especially where youth are concerned, because categorical approaches to personality assessment focus narrowly on clinically relevant symptoms and do not allow for the study of the entire range of BPD symptoms (86).

TABLE 2. Core Diagnostic Features of Borderline Personality Disorder during Adolescence

	Borderline Personality Disorder during Adolescence
Core diagnostic features	Identity disturbance (particularly for girls) Inappropriate, intense anger Paranoid ideation (boys) Chronic feelings of emptiness (deliberate self-harm, dissociation proneness)

Note: No single diagnostic element is suggestive of a borderline personality disorder (BPD) diagnosis during adolescence. Rather, a pattern of two to three diagnostic criteria may be suggestive of emerging BPD in the adolescent population. The diagnostic criteria given in parentheses indicate characteristics of BPD that frequently occur as part of the clinical presentation of BPD during adolescence, although they lack diagnostic specificity.

The assessment of symptoms across the full latent trait of BPD allows for the identification of not only those individuals who are demonstrating clinically significant levels of symptomatology but also those who may be considered at risk (87). Therefore, consistent with the developmental psychopathology principles of homotypic and heterotypic continuity, dimensional approaches allow for the characterization of all possible developmental trajectories toward or away from psychopathology over time as children mature through adolescence and into early adulthood (87).

We have previously reported that Zanarini (21) developed the CI-BPD, a semi-structured interview that was specifically designed to yield BPD diagnoses during adolescence. However, the availability and routine use of a brief screen for BPD could potentially permit for the earlier detection of BPD in clinical samples, perhaps even before the development of more severe externalizing indicators (88). The availability of a brief and reliable screen for BPD would increase the likelihood that practitioners alerted to the possibility of this condition would pursue a more formal evaluation (89,90). This is particularly important for adolescent populations; BPD is commonly misdiagnosed or missed completely in these individuals, because emotional dysregulation and externalizing behavior can be explained as

developmentally appropriate, depending on its magnitude (91).

Reliable and valid self-report measures for the assessment of BPD during adolescence are currently available: for example, the McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD; 89,92); the Borderline Personality Questionnaire (BPQ; 93); the Borderline Personality Inventory (BPI; 94,95); the Personality Assessment Inventory (96); and the Millon Adolescent Clinical Inventory (97,98). Chanen and colleagues (88) showed that the BPQ achieves a good balance of the properties desired in a screening instrument. However, its length is a significant drawback, and this may preclude more widespread clinical application (88). Thus, self-report measures for the assessment of BPD during adolescence are too long to be of practical use for the screening of adolescent populations for BPD (e.g., the BPQ), or they may have been originally developed to assess BPD among adults (e.g., the BPI, the MSI-BPD). This is not to say that measures that were originally developed for adults will not work for adolescents. Noblin, Venta, and Sharp (89) recently established the clinical utility of the MSI-BPD as a screening measure for BPD in a sample of 121 inpatient adolescents; their findings demonstrated support for the validity of the MSI-BPD when it is used among inpatient adolescents, and a clinical cutoff of 5.5 was established. However, the availability of measures specifically designed to capture BPD features as they manifest themselves during adolescence would be of consistent help to clinicians for detecting the warning signs of emerging BPD.

In an effort to fill this gap in the assessment of BPD during adolescence, Crick and colleagues (86) proposed the Borderline Personality Features Scale for Children (BPFSC), which seems to represent a promising instrument for screening for BPD during adolescence, particularly in its 11-item version (87). Crick and colleagues (86) developed this self-report instrument by modifying the borderline scale of the Personality Assessment Inventory (PAI) (96), which is a reliable and valid tool used to assess BPD features among adults. Although an adolescent version of the PAI was developed, its items remained largely unchanged from the adult version. The BPFSC included 24 age-appropriate items to reflect the original four domains of the PAI: affective instability, identity problems, negative relationships, and self-harm. In a community sample of 400 fourth through sixth graders, Crick and colleagues (86) established evidence for the construct validity and moderate stability of the 24-item BPFSC. Evidence for criterion validity against an interview-based diagnostic measure of BPD in inpatient adolescents (23) and concurrent validity in a community sample of boys (99) have also been established. Recently, with the use of item response theory methods, Sharp and colleagues (87) examined individual item performance of the BPFSC in a large community sample of adolescents (N = 964). The hypothesized four-factor structure of the 24-item BPFSC was not supported. The unidimensional item response theory analysis showed instances of local dependence among item pairs as well as item responses that were not strongly related to the underlying construct. As a consequence, items were eliminated to create the unidimensional 11-item brief BPFSC known as the *BPFSC-11*. With the use of a different sample of 371 inpatient adolescents, Sharp and colleagues (87) demonstrated similar indices of construct validity as observed for the BPFSC total score with the BPFSC-11 scores and found evidence for good criterion validity. In particular, receiver operating characteristic analyses showed that the BPFSC-11 had an area under the curve value of .80, which indicates good diagnostic accuracy; sensitivity and specificity analyses demonstrated an ideal cutoff point of 34 (sensitivity = .740; specificity = .714) for the BPFSC-11 (87). Although these findings are far from conclusive, the BPFSC-11 seems to represent the only dimensional measure to date that has been specifically developed to yield a reliable and valid assessment of BPD features in adolescents.

Discussion

Notwithstanding the controversies that historically surrounded the diagnosis of BPD during adolescence, available scientific evidence indicates that BPD can be reliably and validly diagnosed in adolescent clients. Empirical studies suggest that, although there is a subgroup of severely affected adolescents for whom the BPD diagnosis remains stable over time, there appears to be a less severe subgroup that moves in and out of the diagnosis. The rate of diagnostic stability of BPD in adolescents is comparable to that seen in adults, and a select few symptom criteria have consistently emerged as significant predictors of BPD retention in both adolescent and adult samples (34,81). Available evidence recommends that BPD in adolescents be conceptualized from a dimensional or continuous approach rather than a categorical approach, because a dimensional approach may better account for the developmental variability and the heterogeneity found among adolescents (5). Consistent with Miller and colleagues' suggestions (5), current literature indicates that mental health practitioners should strongly consider formally assessing for BPD, either categorically or

continuously, when working with adolescents. Reliable and valid self-report measures as well as semi-structured interviews and observer-rated measures are currently available to clinicians and researchers for the assessment of BPD during adolescence. Regardless of the presence of a full-fledged diagnosis, BPD symptoms in adolescents—even if there are fewer than five—may indeed accurately reflect significant distress and dysfunction that requires intervention (5). Although it is known that there may be negative stigma associated with BPD diagnosis and that this poses a serious concern with regard to applying the diagnosis, available data strongly indicate that this stigma should not preclude clinicians from assessing for BPD and carefully considering BPD diagnosis when warranted (5).

The impact of the changes to the personality disorder general criteria and BPD diagnostic criteria that are incorporated in Section III of the DSM-5 will significantly affect future research in this area. Although the DSM-5 model of personality disorders is not without criticism (see, for example, the position summarized in Krueger and Eaton's article [100]) and it has only been added to the provisional section of the DSM-5 (i.e., Section III), the proposed removal from the DSM-5 Section III criteria of any reference to adult age for the diagnosis of personality disorders (101) will be likely to prompt the assessment of BPD during adolescence. The shift to a hybrid dimensional-categorical model for personality as well as for personality disorder assessment and diagnosis in the DSM-5 is highly consistent with Michonski and colleagues' findings (26) regarding the need for flexible diagnostic systems for the assessment of BPD during adolescence.

The development and refinement of diagnostic criteria and assessment instruments specifically designed to capture BPD manifestations during adolescence and childhood is clearly among the priorities of the agenda for future research involving BPD. Current evidence indicates that BPD does not appear "out of the blue" during adolescence; rather, symptoms of ADHD and ODD during childhood or other childhood problem behaviors usually precede the emergence of BPD during adolescence (102). Of course, these data do not imply that all children with ADHD or ODD will develop BPD later during their lives. Longitudinal studies have shown that BPD is frequently diagnosed in adult patients who had been diagnosed with ADHD in childhood. The question of whether ADHD and BPD randomly co-occur as comorbidities or whether they have similar origins or share common pathological mechanisms remains unresolved (63). It is hoped that future studies will illuminate the developmental pathways that lead some children to develop BPD during adolescence or adulthood and that both risk factors and protective factors will be identified. The co-occurrence of other personality disorders (as well as other mental disorders) with BPD during adolescence and the impact of this on the course, outcome, and treatment response of BPD are likely to receive special attention in the near future. In adult patients, BPD has been reported to be characterized by high co-occurrence rates with other disorders, particularly bipolar disorder, narcissistic personality disorder, and schizotypal personality disorder (103). It has also been found that the co-occurrence of BPD with other personality disorders seems to influence the likelihood of remission and the time to remission of patients with BPD (104). These findings clearly highlight the need to study the impact of co-occurring personality disorders on the clinical course of BPD in adolescent samples.

The identification of very early manifestations of BPD during childhood is likely to represent a major research task in the future. Some studies have suggested that BPD symptoms are likely to be detectable at an early age; specific features of BPD (e.g., self-harm, traits of impulsivity and affective instability) are present during childhood, and they are predictive of a BPD diagnosis during adulthood (77,105). These few studies do not allow for the drawing of any firm conclusion about the construct validity of a BPD diagnosis during childhood, but they indicate the relevance of this research topic and represent a path for future studies.

Conclusions

A qualitative review of the scientific literature suggested that adolescence is a critical point for the early identification and therapeutic treatment of BPD. Available research data indicate that BPD can be reliably and validly diagnosed in adolescents. Research evidence indicates that there is no single symptom that is predictive of later BPD diagnosis during adolescence; rather, a pattern of two to three selected BPD symptoms that are evident during adolescence seemed to be highly predictive of later BPD diagnosis, particularly when measures that were specifically designed to assess for BPD during adolescence were used as part of the assessment process.

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